

was canceled. In view of the following remarks, applicants submit that the rejection of claim 62 in the parent case was inappropriate and that such a rejection would not be appropriate in this case.

Claim 62 of the parent application and claims 27-39 of the present application set forth methods for treating a subject afflicted with intestinal malabsorption. The methods include "administering to [the] . . . subject an amount of a composition effective to increase [the] . . . subject's blood folate level to a normal blood folate level . . . ."

In the parent case, the April 22, 1999, office action rejected claim 62 under 35 U.S.C. § 103(a) for obviousness over U.S. Patent No. 5,006,655 to Müller et al. ("Müller") or over U.S. Patent No. 5,624,686 to Shimoda et al. ("Shimoda") in view of U.S. Patent No. 3,833,739 to Pedersen et al. ("Pedersen"), U.S. Patent No. 4,753,926 to Lucas et al. ("Lucas"), and Müller. More particularly, the April 22, 1999, office action states (in the paragraph bridging pages 2-3):

Mueller et al. disclose a composition containing 5-methyl-9S)-tetrahydrofolic [sic] acid and 5-10 methyl-(6S)tetrahydrofolic acid. See Abstract. Also, Shimoda et al. disclose a composition containing vitamins in particular amounts and natural reduced folates (col. 4, lines 3-17, col. 7, lines 61-65). Claims 49 and 56 differ from the references in the use of the folate with a nutritional substance which is a vitamin in particular amounts. However, Pedersen et al. disclose that it is known to use folacin in potato flake. See col 6, lines

1-12. Lucas et al. disclose that it is known to use folic acid in infant food. The specification discloses that these substances are broken down in the digestive tract to the reduced form by an enzyme (col. 5, lines 9-16). If it is known that folic acid and folacin are broken down to make the claimed compositions, then it is obvious that such natural compounds can also be eaten in foods. The references, Pedersen et al. and Lucas et al., are seen to be cumulative to show an improvement in the art. Applicants admit in the specification that 5 formyl-tetrahydrofolic acid and 5 methyl-tetrahydrofolic acid have been used in therapeutic doses. See page 5, lines 17-24. Mueller et al. disclose that their invention is an improvement of 6S and R forms with a natural form of 6S (col. 2, lines 3-7). Certainly, it would have been obvious to use a vitamin type substance with other foods, as food enrichment is well known and vitamins are rarely taken alone except as in pills. Therefore, it would have been obvious to one of ordinary skill in the art to use a reduced folate with other vitamins in the claimed composition.

The April 22, 1999, office action, at page 3, first full paragraph, continues:

The further limitations of [claim 62, amongst other specifically recited claims] . . . as to the addition of essential nutrients, the isomer being chirally pure and the particular natural isomers are seen to have been shown by the reference as above or are inherent characteristics.

As the above-quoted passages from the April 22, 1999, office action demonstrate, the April 22, 1999, office action applied the prior art references only to compositions and did not discuss the uses to which Müller's compounds (or those of the other cited prior art references) can be put, much less how these uses relate to then pending claim 62. Since claim 62 of the parent application was directed not to a composition but, instead, to a method for treating intestinal malabsorption, the April 22, 1999, office action clearly failed to apply the teachings of the cited references against then pending claim 62. Since presently pending claims 27-39, like claim 62 of the parent case, are directed to methods for treating subjects afflicted with intestinal malabsorption, applicants respectfully submit that it would be inappropriate to reject presently pending claims 27-39 on the grounds set forth in the April 22, 1999, office action.

Furthermore, a careful reading of the prior art references cited in the parent application reveals that none of these references teach or suggest using the compositions recited in claim 62 (or presently pending claims 27-39) to treat intestinal malabsorption.

More particularly, the only uses discussed in Müller appear at column 1, lines 46-55, where it is said:

5-CHO-(6R,S)-THF (folinic acid) is used in the form of its calcium salt (leucovorin) as a pharmaceutical for the treatment of megaloblastic folate-deficiency anemia, as an antidote to increase the tolerability of folic acid antagonists, specifically of aminopterin, methotrexate and fluorouracil in cancer therapy ("leucovorin rescue") and the treatment of autoimmune diseases such as psoriasis and rheumatoid arthritis, as well as to increase the tolerability of certain antiparasitics, for example trimethoprim-sulfamethoxazole, in chemotherapy.

Moreover, nothing in Müller relates to treatment of intestinal malabsorption.

Shimoda discloses the use of active folic acid (in the form of leucovorin) to increase the amount of a reduced form of folic acid in the plasma of pigs, thereby improving their efficiency of fattening. Shimoda contains no mention of intestinal malabsorption or treatments therefor.

Pedersen relates to methods for increasing the nutritional value of potato flakes. Pedersen does not indicate that the resulting potato flakes can be used to treat intestinal malabsorption.


Lucas relates to infant foods which can be used to reduce the risk of infants developing vitamin B<sub>2</sub> deficiency and to reduce the incidence of hyperbilirubinaemia in low birth-weight infants. Nothing in Lucas teaches or suggests the use of these infant foods to treat intestinal malabsorption.

In view of the above-described uses set forth in Müller, Shimoda, Pedersen, and Lucas, applicants submit that these references, individually and in combination, fail to teach or suggest any method for treating a subject afflicted with intestinal malabsorption, much less a method which involves "administering to the subject an amount of a composition effective to increase the subject's blood folate level to a normal blood folate level . . . ", as recited in the present claims 27-39, and still much less a method which uses the specific compositions recited in the present claims.

In view of the foregoing, it is submitted that this case is in condition for allowance, and such allowance is earnestly solicited. Should any issues remain which can usefully be discussed by telephone, the Examiner is invited to contact applicants' undersigned attorney at the number provided.

Respectfully submitted,

Dated: October 15, 1999

  
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